LED Skin Rejuvenation System

User's Manual

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Chapter 1 Basic Concept and Machine Theory

I. Basic concepts of light and wavelength:

Light: Light is also classed as visible and invisible. Visible light is made up of many different colors. Every color has specific wavelength and measurement. White light is made up of all colors of light.

Wavelength: Wavelength is the distance between adjacent wave crests represented by λ and measured in meters. (More common measure for wavelength is nanometers (nm) which is 9 –10.)

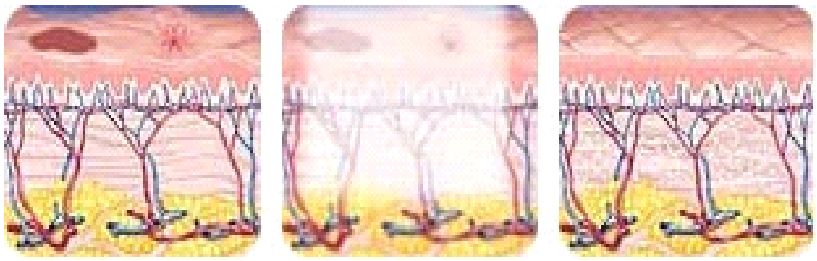
Spectrum stretches picture：

light	Wavelength λ(nm)
Violet	380～420
Blue	420～470
Cyan	470～500
Green	500～570
Yellow	570～600

Orange	600～630
Red	630～780

II. LED light introduce:

LED luminescence, also called cold laser is a kind of homochromy light with high purity and narrow spectrum and characterized of high safety when compared with laser or intensive pulse light (IPL); it is even safer than sunlight as it does not contain harmful ultraviolet light or infrared light. In 2003, the FDA of USA initially approved application of LED in acne treatment and skin freshening. The beautification and treatment systems driven with LED light source and developed by our company employ lots of unique advanced technologies and lead the world in optical beautification field. LED light energy is capable to penetrate skin down to 50 mm depth underneath. All of currently existing skin fleshing and wrinkle removing methods unavoidably introduces heat effects, which cause increase of both collagen protein and collagen enzyme, while such enzyme restrains such protein from growing; this is the reason why effects become no longer better even with increased treatment times when laser, intensive pulse light, RF, etc have been applied to freshen skin or remove wrinkles for certain period. LED luminescence does not introduce heat effects and ensures clients of “ultimate” skin freshening effects. When LED luminescence penetrates base skin layer, melanin is promoted in decomposition; and experimental results have proven early skin beautification and whitening. When LED is applied to remove whelks, it is intended to kill the propionic acid bacilli that causes acnes, which are then remove from skins. As the deepening of research, more effects of LED luminescence in skin treatment will be found.



Before During After

Chapter 2 Product Main Introduce

I. Operation principle

Truest Laser LED skin-rejuvenation treatment systems developed by company employ the LED originally imported from USA with above 99% purity and narrow spectrum red, blue, yellow and green light sources. The genetic biological wave light sources are utilized to rapidly effect hypodermic tissue, get absorbed by linear cell particles, and introduce most efficient light chemical and biological reaction ---- enzyme-promoting reaction, which increases cell activity, promotes melanin decomposition and cell metabolism, causes skin to excrete lots of collagen protein and improves white blood cell's bacterium-killing capability so as to achieve treatment effects like skin whitening, skin freshening, wrinkle removing, anti-aging, etc. When such light sources are applied to treat dark sores, they are absorbed in large quantity by the acne bacilli that reproduce light-sensitive substances; through killing acne propionic acid bacilli, skin acnes are subsequently removed.

II. The treatment range:

- Removing flecks, sunning spots, pigment sediments, reduction of sunlight damage to skin;
- Treatment for spots, dark sores and folliculitis;
- Lightening red spot acnes and capillary vessel expansion;
- Smoothing fine wrinkles and tightening loose or aging skin;

- Shrinking coarse pores and curing skin roughness;
- Treatment for dark or dim skins caused by deficient metabolism or circulation;
- Release of fatigue, reduction of pressure and improvement on sleep;
- Curing skin scurf or folliculitis-caused hair losing;
- Recovery from slight pathological replacements of facial nerves;
- Recovery of injured skin:
  1. skin recovery after skin replacement, recovery from tattoo or tattoo allergy;
  2. Laser eyebrow washing, instant recovery from tattoo washing, sensitive skin recovery;
  3. Recovery from skin burns, blisters, or pigment sediments caused by excess energy or improper operation during photon treatment;

III. The technical parameter

- Type of light sources: LED gene biological wave light sources
- Wavelength: Red light: 640nm±5nm

  Blue light: 470nm±5nm

  Mix Red and Blue (Wavelength is not changed)
- Intensity of light: Wavelength 640nm≥8000mcd

  Wavelength 470nm≥4000mc
- Square of spot: 47×30cm
- Power supply: 220V, 50Hz □ 110V, 60Hz □
- Export power: 80mw/cm2
- Density if power: ≥300J/cm2
- Environment temperature: 5℃~40℃
- Dimension of main machine: 59.5*56*120.7 cm
- Weight of main machine: 49kg
-

Ⅳ. Characteristic

- Be proven to be 100% safe and highly effective
- No UVA – No UVB – No Ultra-Violet – No Infared
- Non-invasive, there is no downtime and no damage to skin cells
- Simple equipment operation requiring no professional trainings;
- Long application life, stable performance, long continuous working time;
- Clients can apply makeup immediately after treatment；
- Strong lighting energy, intensive penetration, big-size treatment area, and short treatment time;
- applicable for any skin characteristics;
- Low treatment costs (when compared with photon or laser methods);
- Simple repair and no special requirements for treatment environment;
- Light sources arrayed in matrix to accommodate human facial profiles;

Chapter 3 Clinical application

lights	Function	clinical application

Red	promotes metabolism, accelerates blood circulation, improves skin moisture, increases skin collagen protein, intensifies skin elasticity and smoothes fine wrinkles;	Anti-aging, skin whitening, freshening, skin moisturizing, brightening, wrinkle remove, sensitive skins treatment, hair regeneration, emotional relaxation, and release of fatigue.
Blue	bacteria killing, skin cleaning, cell activation, injury recovery, promoting protein-ossein(collagen) composition;	Acne, diminish inflammation， purify skin.
Purple light (mixture of red and blue)	Alleviate serious acne	repair damaged tissue，reduce pore size, swollen after surgery，Acne

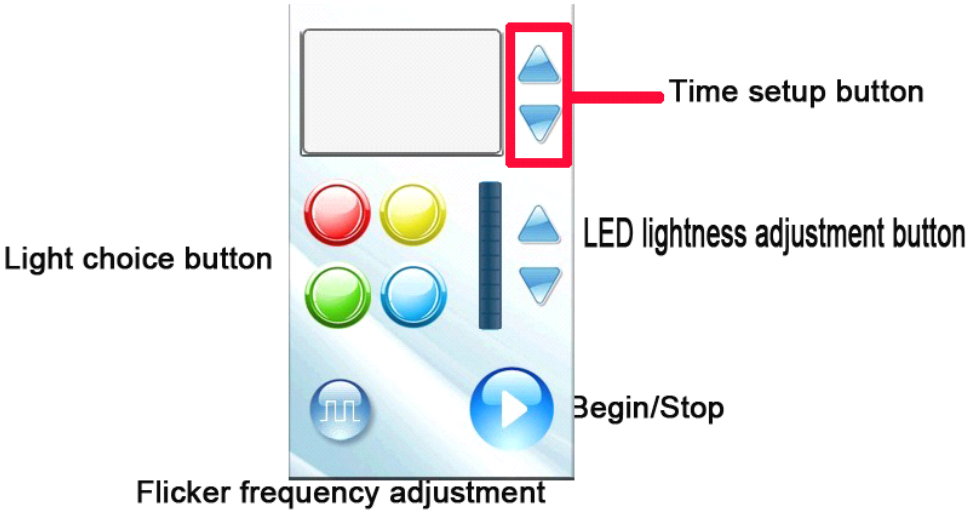
Note: yellow lights and Green lights are the optional lights.

Chapter 4 Installation and Operating

a. Operating Procedures

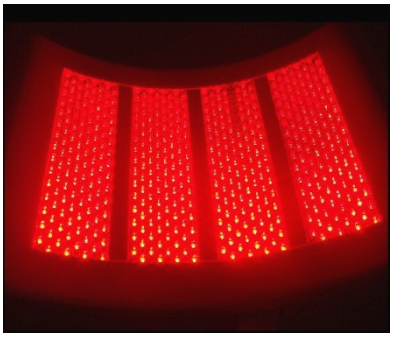
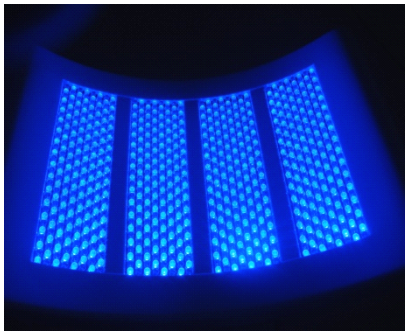
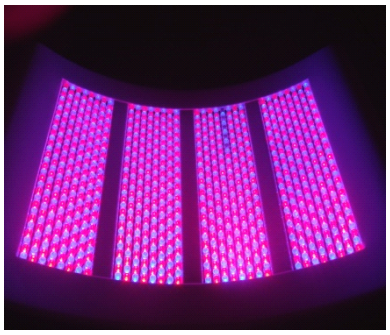
1. Place the instrument stably at preset position;
2. Connect power supply line to the receptacle indicated in back board.

Color touch screen operation:



"↑" and "↓": set up the time, the unit of time is minter minutes, press "↑"is increase the time, press "↓" is decrease the time. Illumination longest is 99 minutes.

"LED1" and "LED2": "1" is blue LED light and "2" is red LED light, press "Ⅰ" key or "Ⅱ" key one time is open the lights, press "LED" key or "LED" key two time is closed the lights. At the same time, press LED1 and LED2, open violet light (Red blue mixed light).

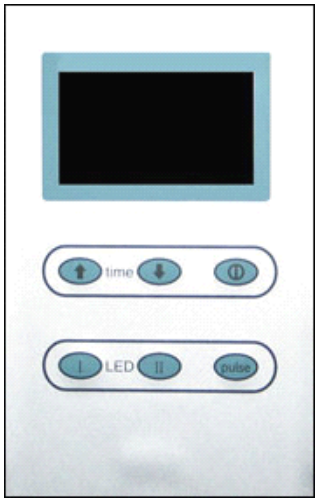




"⊙" key: press **to start or stop the shine.**

" **": when you want to choose the shoot model, press "pulse" one times, the LED lights will shoot 1 time/second; press "** **" two times the LED lights will shoot 2 times/second; press "pulse" three times, the LED lights will stop shoot and keep bright.**
Switch off red or blue light sources after 20-30 minutes illumination to terminate treatment;

Button screen operation:

1. Place the instrument stably at preset position;
2. Connect power supply to the receptacle indicated in left board;
3. Rotate anticlockwise the nut at right arms, adjust for required height of light sources, then rotate clockwise to tighten ;
4. Open the switch in instrument left to "on" status;
5. Set up the time and LED light on the back of screen sketch ;



" ↑ " and " ↓ ": set up the time, the unit of time is minter minutes, press " ↑ "is increase the time, press " ↓ " is decrease the time.

" Ⅰ " and " Ⅱ ": " Ⅰ " is red LED light and " Ⅱ " is blue LED light, press " Ⅰ " key or " Ⅱ " key one time is open the lights, press "LED" key or "LED" key two time is closed the lights.

"⊙" key: press"⊙" to start or stop the shine.

"pulse": when you want to choose the shoot model, press "pulse" one times, the LED lights will shoot 1 time/second; press "pulse" two times the LED lights will shoot 2 times/second; press "pulse" three times, the LED lights will stop shoot and keep bright.

6. Switch off red or blue light sources after 20-30 minutes illumination to terminate treatment;
7. Rotate switch to "off" position and disconnect power supply.

Chapter 5 Treatment procedures

I. Typical case treating procedure:

- Acne

Treating procedure: cleaning → deep cleaning → needle cleaning → LED care → blue lighting 20 minters;

Time interval: once in three days, once in a week after initial effects or for skin allergy sufferers;

Instruction: 1. Blain sufferers must be needle cleaned prior to treatment;

2. Spots removing products can be applied after treatment for quicker effects (for example, application of inflammation-diminishing facial masks after lighting illumination);
3. Severe or endocrine sufferers must be internally cured with medicine after treatment;
4. Prohibition of pungent, spicy, stimulating or greasy foods.

- **Skin rejuvenation**

Treating procedure: cleaning → LED care →red lighting 20 minters;

Time interval: once in three days, once in a week after initial effects or for skin allergy sufferers;

Instruction: Skin rejuvenation products can be applied after treatment for quicker effects.

- **Skin Recovery**

Damage (after face lifting operation): cleaning →red lighting 20 minters;

Allergy (for example: red blood filament): cleaning → LED care →red lighting 20 minters

Swell or hot pain (initial period after skin replacement, laser or IPL operation): blue lighting 25-30minters.

- **Wrinkle removal and face-lifting**

Treating procedure: cleaning → LED care →red lighting 20 minters;

Time interval: once in three days, once in a week after initial effects or for skin

allergy sufferers;

Instruction: wrinkle products can be applied after treatment for quicker effects.

- **Pigment removal**

Treating procedure: cleaning → LED care →red lighting 20 minters;

Time interval: once in three days, once in a week after initial effects or for skin allergy sufferers;

Instruction:
1. Anti-oxygen spot-lightening products may be applied prior to treatment for quicker effects.
2. Dormice or yellow brown spots shall be burst with laser beams during first treatment.
3. Sunning shall be avoided after treatment and suntan cream shall be applied to guard against sunning.

II. Operating precautions

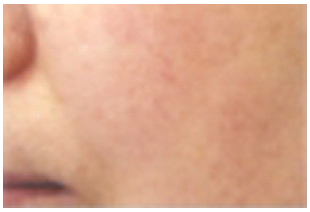
1. Ornament wearing clients shall take off their earrings and necklaces prior to treatment so as to avoid light reflection during treatment;
2. It is prohibited to shed lighting onto eyes, and it is recommended to wear dark-colored glasses or to cover eyes with semi-humid thick cotton plates during treatment;
3. Select different spectrum for treatment according to actual demands.

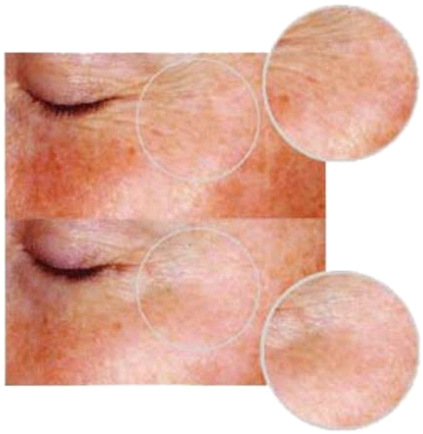
III. Prohibition scope

- Red spot lupus sufferers;
- Light source allergy sufferers;
- Patients taking antibiotics (like: acheomycin, vitamin A acid) for treatment on acne.

Chapter 6 Clinical result before and after compare pictures:

Before after





Chapter 7 Frequently Asked Questions

- **What is LED Skin Rejuvenation?**

LED Skin Rejuvenation is the interaction of light, delivered through Light Emitting Diodes (LED), to activate cell receptors causing them to produce collagen or multiply. One of the original applications for LED was Photo Dynamic Therapy (PDT), using photo-activated creams for the treatment of actinic keratosis and pre-cancerous lesions.

- **How are LED different from Laser and Intense Pulsed Light (IPL) therapy?**

Other light-based skin therapies including intense pulsed light and laser treatments rely on thermal injury to the skin's collagen, water or blood vessels to create changes in the skin appearance. LED Skin Rejuvenation does not rely on thermal energy and the related tissue trauma to effect change. Therefore, patients are not subject to the variables associated with wound healing.

- **How does LED Skin Rejuvenation work?**

LED offer a totally natural, non-ablative method for skin rejuvenation. The light from the LED interacts with cells and stimulates them to produce new collagen and elastin. Studies confirm that the same LED energy can be used to inhibit collagen formation, which can be helpful in the treatment of scars. By manipulating the wavelengths, cells can be turned on and off. Red light LED is used for photo-rejuvenation. Blue light LED are used in the treatment of acne.

- **How long until I see results?**

Everyone's skin varies, but most people feel and see a difference in about four treatments. Because of differences in damaged skin, some people will see the benefits almost immediately and others will need more treatments. Because treatments are progressive, we recommend treatments for at least 10 weeks, for maximum results.

- **Do LED Treatments work on everyone?**

LED treatments are proven to work on all skin types. There is over a 90% success rate for people using our system.

- **Can this hurt my eyes?**

No studies have been found showing any harmful effects to the eyes when using our product correctly. However, we recommend not staring directly into our LEDs and we have provided a supply of eye shields for your comfort.

- **Will the treatments hurt?**

No. The treatment is very relaxing. The delivery of the LED energy to the skin is completely pain free. The energy generated by the LED is cool and gentle enough to treat all ethnic skin types.

- **Can I have LED Skin Rejuvenation with other treatments?**

Yes. LED Skin Rejuvenation can be administered alone or in conjunction with other treatments. It is highly complementary with other skin treatments as well as non-ablative laser and IPL treatments. Cosmetic surgeons worldwide are beginning to choose LED Skin Rejuvenation as one of their preferred treatments for fine lines, pigmented lesions (brown spots and freckles) and other skin problems associated with photoaging.

- **Can I combine LED treatments with other skin care?**

Yes. LED treatments can be used alone or with other skin care treatments. Many physicians have found LED treatments to complement other skin care treatments and use the skin care to improve the effect.

- **What will I feel like after my treatment?**

Most patients return to normal activities immediately. What patients like the most about LED Skin Rejuvenation is that treatments are fast and they don't have to miss any activities.

Chapter 8 After sale service

I. Warranty Policy

- Thanks for you to buy Truest Laser LED Skin-rejuvenation system products! We will provide you one-year period of free-of-charge warranty repair service staring from date of your purchase;

- Warranty service is only given to product itself, any other loss or damage caused by product failure is not covered under this warranty liability;
- Warranty does not cover component normal wear, improper application, or damages caused by accidents or unauthorized disassembly;
- Effective sale contracts shall be presented for any repair during such warranty period. And also please kindly keep the warranty card .

II. Repair Service contact info:

Any repair questions, please contact the original manufacturer:

Shenzhen HFD Manufacture Investment Co., Ltd.

www.hfdhealthmedical.com

http://www.hfdhealthmedical.com.cn http://hfdbeauty.en.made-in-china.com/

Skype:truestlaser Msn:truestlaser@hotmail.com

Mobile:86-18925212287 Tel:86-516-85558744

Chapter 9 Spare parts list:

Name	**Quantity**	
Main machine	1	
Treatment head	1	
eye shield	1	
Key	2	
Power supply line	1	
Using manual	1	
Guarantee card	1	